Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original): An array for bringing one or more reagents in contact with two or more biological targets comprising,

one or more reagents; and

one or more barriers adapted to at least temporarily maintain said reagents in at least one arrangement of two or more reagent portions so that said portions do not commingle with each other, wherein each said portion is maintained at a predefined locale in said arrangement so that each of said portions is adapted to be brought into contact with one or more predefined, biological targets.

Claim 2 (original): The array of claim 1, comprising at least two or more reagents wherein at least one of said reagent portions comprises all or part of two or more reagents.

Claim 3 (original): The array of claim 1, wherein one or more of said reagents is selected from a group consisting of DNA, RNA, antibodies, peptides, proteins, enzymes, carbohydrates, oligonucleotides, recombinant vectors, drugs, viruses, bacteria, mammalian cells, small organic molecules, and large organic molecules.

Claim 4 (original): The array of claim 1, wherein one or more of said barriers comprises one or more at least partial capillary tubes.

Claim 5 (original): The array of claim 4, wherein one or more of said capillary tubes is made of at least one material selected from a group consisting of plastic, glass, nitrocellulose, nitrobenzyloxymethyl cellulose, aminobenzlyoxymethyl cellulose, aminophenylthioether cellulose, diethylaminoethyl cellulose, and polyvinylidene flouride.

Claim 6 (original): The array of claim 4, wherein said capillary tubes have diameters between 1μm to 1cm.

Claim 7 (original): The array of claim 4, wherein one or more of said arrangements comprises between 10 to 100,000 capillary tubes.

Claim 8 (original): The array of claim 4, wherein said capillary tubes have diameters between 1μm to 1cm.

Claim 9 (original): The array of claim 4, wherein one or more of said arrangements comprises between 100 to 10,000 capillary tubes.

Claim 10 (original): The array of claim 4, wherein one or more of said arrangements comprises a cross-sectional slice of a plurality of said capillary tubes.

Claim 11 (original): The array of claim 10, wherein said capillary tubes of said cross-sectional slice have a height between about 1μm to 1cm.

Claim 12 (original): The array of claim 10, wherein said capillary tubes of said cross-sectional slice have a height between about 10μm to 1cm.

Claim 13 (original): The array of claim 1, wherein one or more of said reagents are immobilized among said barriers using one or more carriers comprising one or more components selected from a group consisting of cellulose, carbolynmethylcellulose, agarose, dextran, polyaminopolystyrene, polylysine, ploy acrylamides, and derivatives thereof.

Claim 14 (original): The array of claim 1, wherein two or more of said reagent portions are adapted to be brought simultaneously into contact with two or more predefined, biological targets.

Claim 15 (original): The array of claim 1, wherein one or more of said reagent portions are adapted to transfect one or more of said reagents into one or more predefined, biological targets.

Claim 16 (original): The array of claim 1, wherein one or more of said reagent portions is adapted to stain one or more predefined, biological targets.

Claim 17 (original): The array of claim 1, wherein one or more of said barriers comprises one or more supports having at least one substantially level surface comprising a plurality of spaces surrounding and between said reagent portions wherein said reagent portions are maintained at said predefined locations so that said portions do not comingle.

Claim 18 (original): The array of claim 17, wherein one or more of said supports is made of at least one material selected from a group consisting of plastic, glass, nitrocellulose, nylon, polyvinylidene fluouride, and metal.

Claim 19 (original): The array of claim 17, wherein one or more of said supports comprises one or more solid supports selected from a group consisting of rigid glass plates, rigid plastic plates, nitrocellulose membranes, nylon membranes, polyvinylidene difluoride membranes, metal membranes, and porous membranes.

Claim 20 (original): The array of claim 17, wherein one or more of said supports comprise a layer of one or more polymers adapted to immobilize one or more of said reagents.

Claim 21 (original): The array of claim 20, wherein one or more of said polymers are selected from a group consisting of polylysine and polyethyleneimine.

Claim 22 (original): A method for making one or more arrays for bringing one or more reagents in contact with two or more biological targets comprising the steps of,

providing one or more reagents; and

providing one or more barriers adapted to at least temporarily maintain said reagents in at least one arrangement of two or more reagent portions;

immobilizing said reagent portions in said arrangement so that said portions do not comingle with each other, whereby each said portion is maintained at a predefined locale in said arrangement so that each of said portions is adapted to be brought into contact with one or more predefined, biological targets.

Claim 23 (original): The method of claim 22, wherein one or more of said barriers comprises one or more at least partial capillary tubes, and wherein said step of immobilizing comprises the steps of,

introducing one or more of said reagents into said capillary tubes; and

bundling said capillary tubes in said predefined arrangement.

Claim 24 (original): The method of claim 23, further comprising the step of cutting said bundled capillary tubes into a plurality of cross-sectional slices.

Claim 25 (original): The method of claim 23, wherein said step of introducing comprises the steps of, mixing one or more of said reagents with one or more carrier solutions; placing said mixture of reagents and carrier solution into one or more of said capillary tubes; at least partially solidifying said mixture until said mixture is substantially immobile.

Claim 26 (original): The method of claim 25, further comprising the step of cutting said bundled capillary tubes into a plurality of cross-sectional slices.

Claim 27 (original): The method of claim 23, wherein one or more of said capillary tubes is made of at least one material selected from a group consisting of plastic, glass, nitrocellulose, nitrobenzyloxymethyl cellulose, aminobenyloxymethyl cellulose, aminophenylthioether cellulose, diethylaminoethyl cellulose, and polyvinylidene fluoride.

Claim 28 (original): The method of claim 23, wherein one or more of said arrangements comprises between 10 and 100,000 capillary tubes.

Claim 29 (original): The method of claim 23, wherein one or more of said arrangements comprises at least 10,000 capillary tubes.

Claim 30 (original): The method of claim 22, wherein one or more of said reagents are immobilized among said barriers using one or more carriers comprising one or more components selected from a group consisting of cellulose, carbolynmethylcellulose, agarose, dextran, polyaminopolystyrene, polylysine, polyacrylamides, and derivatives thereof.

Claim 31 (original): The method of claim 23, further comprising the steps of removing said reagent portions from said tubes and fixing said portion to one or more supports having one or more substantially level surfaces wherein said reagent portions are maintained at said predefined locations so that said portions do not commingle.

Claim 32 (original): The method of claim 31, wherein said step of immobilizing further comprises the steps of,

pretreating one or more of said surfaces by applying one or more layers of one or more polymers, adapted to interact with one or more of said reagents.

Claim 33 (original): The method of claim 32, wherein one or more of said polymers is selected from a group consisting of polylysine and polyethyleneimine.

Claim 34 (original): The method of claim 31, wherein one or more of said supports is made of at least one material selected from a group consisting of plastic, glass, nitrocellulose, nylon, polyvinylidene fluoride, and metal.

Claim 35 (original): The method of claim 31, wherein one or more of said supports comprises one or more solid supports selected from a group consisting of rigid glass plates, rigid plastic plates, nitrocellulose membranes, nylon membranes, polyvinylidene difluoride membranes, metal membranes, and porous membranes.

Claim 36 (original): The method of claim 22, wherein one or more of said reagents is selected from a group consisting of DNA, RNA, antibodies, peptides, proteins, enzymes, carbohydrates, oligonucleotides, recombinant vectors, drugs, viruses, bacteria, mammalian cells, small organic molecules, and large organic molecules.

Claim 37 (currently amended): A method for bringing two or more reagents in contact with one or more biological targets comprising the steps of,

providing an array comprising,

two or more reagents; and

one or more barriers adapted to at least temporarily maintain said reagents in at least one arrangement of two or more reagent portions so that said portions do not commingle with each other, wherein each said portion is maintained at a predefined locale in said arrangement so that each of said portions is adapted to be brought into contact with one or more predefined, biological targets;

providing one or more said biological targets ~~immobilized~~ on a target support;

designating an address to each reagent portion based on said predefined locale and an address to each of said biological targets;

corresponding at least one of said reagent portions to at least one of said biological targets based on said designated reagent portion and biological target addresses;

contacting said predefined reagent portions with their respective corresponding biological targets;

applying one or more conditions, whereby some or all of each specific reagent portion dissociates from said barriers and is transferred to said specific reagent portion's corresponding biological target immobilized on said target support.

Claim 38 (original): The method of claim 37, wherein said array comprises at least two or more reagents and wherein at least one of said reagent portions comprises all or part of two or more reagents.

Claim 39 (original): The method of claim 37, wherein one or more of said reagents is selected from a group consisting of DNA, RNA, antibodies, peptides, proteins, enzymes, carbohydrates, oligonucleotides, recombinant vectors, drugs, viruses, bacteria, mammalian cells, small organic molecules, and large organic molecules.

Claim 40 (Original): The method of claim 37, wherein one or more of said barriers comprises one or more at least partial capillary tubes.

Claim 41 (Original): The method of claim 40, wherein said barriers comprise a plurality of bundled capillary tubes.

Claim 42 (original): The method of claim 41, wherein said barriers comprise one or more

cross-sectional slices of said plurality of bundled capillary tubes.

Claim 43 (original): The method of claim 37, wherein said barriers comprise one or more supports having at least one substantially level surface comprising a plurality of spaces surrounding and between said reagent portions wherein said reagent portions are maintained at said predefined locations so that said portions do not commingle.

Claim 44 (original): The method of claim 43, wherein one or more of said supports comprises one or more solid supports selected from a group consisting of rigid glass plates, rigid plastic plates, nitrocellulose membranes, nylon membranes, polyvinylidene difluoride membranes, metal membranes, and porous membranes.

Claim 45 (original): The method of claim 43, wherein one or more of said supports comprises a layer of one or more polymers adapted to immobilize one or more of said reagents.

Claim 46 (currently amended): The method of claim 37, wherein said step of providing one or more biological targets comprises the step of seeding and adhering two or more ~~target~~ cells on ~~one or more cell growth supports~~ said target support.

Claims 47-48 (cancelled)

Claim 49 (currently amended): The method of claim ~~48~~ 37, wherein said step of applying one or more conditions comprises the step of applying one or more electric pulses to one or more of said reagent portions.

Claim 50 (original): A method for bringing one or more reagents in contact with two or more biological targets comprising the steps of,

providing an array comprising,

two or more reagents; and

one or more barriers adapted to at least temporarily maintain said reagents in at least one arrangement of two or more reagent portions so that said portions do not comingle with each other, wherein

each said portion is maintained at a predefined locale in said arrangement so that each of said portions is adapted to be brought into contact with one or more predefined, biological targets;

providing one or more biological targets;

designating an address to each reagent portion based on said predefined locale and an address to each of said biological targets;

corresponding at least one of said reagent portions to at least one of said biological targets based on said designated reagent portion and biological target addresses;

contacting said predefined reagent portions with their respective corresponding biological targets, whereby some or all of each specific reagent portion is transferred to said target's corresponding specific reagent portion.

Claim 51 (new): The method of claim 37, wherein one or more of said barriers comprises one or more capillary tubes.

Claim 52 (new): The method of claim 51, wherein said barriers compromise one or more cross-sectional slices of said capillary tubes.

Claim 53 (new): The method of claim 37, further comprising the step of separating said target support from said array.

Claim 54 (new): A method for bringing two or more reagents in contact with one or more biological targets comprising the steps of,

providing an array comprising two or more reagents; and one or more barriers adapted to at least temporarily maintain said reagents in at least one arrangement of two or more reagent portions so that said portions do not commingle with each other, wherein each said portion is maintained at a predefined locale in said arrangement so that each of said portions is adapted to be brought into contact with one or more predefined, biological targets;

providing one or more biological targets on said array, wherein at least one of said reagent portions contacts at least one of said biological targets;

applying one or more conditions, whereby some or all of each specific reagent portion dissociates from said barriers and is transferred to said specific reagent portion's corresponding biological target.

Claim 55 (new): The method of claim 54, wherein said biological targets are eukaryotic cells.

Claim 56 (new): The method of claim 54, wherein said step of applying one or more conditions comprises the step of applying one or more electric pulses to one or more of said reagent portions.

Respectfully submitted,

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